

6.2. OPEN SPACE, BUFFERING, COMPATIBILITY, LANDSCAPING, AND TREES

6.2.1. OPEN SPACE

- A. **Purpose and Intent.** The purpose of this section is to require open space that encourages preservation of natural features, adds to the visual character of a development, and provides active and passive recreational opportunities for residents and visitors alike. Open space is an asset to the community, and it is the intent of this section to:
1. Define standards in which new development shall dedicate a portion of area(s) as open space;
 2. Designate minimum open space requirements, open space size, open space types, and open space design standards;
 3. Define the minimum maintenance and ownership requirements for open spaces.
 4. Promote open space accessible to the public in new developments; and
 5. Expand development of greenways and connectivity between both built-up and fallow open spaces across town.
- B. **Applicability.** All new development shall comply with the standards of this section. The following shall also apply in instances of repairs, renovations, or additions, or change in use. No permit for construction of any building, structure or use may be issued until open space has been provided in accordance with this LDO.
1. **Repair or Renovation.** A building may be repaired or renovated without requiring open space per the requirements of this LDO provided there is no increase in gross floor area.
 2. **Minor.** When a building or site is increased in gross floor area or improved site area by ten (10) percent or less, open space is required only for the additional floor area or improved site area. Improved site area shall include site improvements such as utility installations, landscape modifications, additional impervious surfaces (including parking), and/or construction of structures.

3. **Major.** When a building or site is increased in gross floor area or improved site area by greater than ten (10) percent, open space must be provided for the total of the entire property. Improved site area shall include site improvements such as utility installations, landscape modifications, additional impervious surfaces (including parking), and/or construction of structures.
4. **Change in Use.** A change in use shall not require compliance with this section.

C. Exemptions.

1. **Single-Family.** Development or redevelopment of individual single-family dwellings not part of a subdivision approval is exempt from the standards of this section.
2. **Town Center (TC) District.** Recognizing the importance of the continued development of the Town Center (TC) district, any development or redevelopment within the TC district which cannot meet the open space requirements of this section due to size constraints (i.e., size of lot) or parcel configuration may request a design alternative, to be reviewed by the Board of Commissioners, exempting the open space requirements of this section.

D. Minimum Open Space Required. The minimum amount of open space required in a development shall be in accordance with this section, however a development may provide more than the minimum required open space. Where open space more than requirements is provided, see Section 6.3: Conservation Subdivision for alternative subdivision standards. Gross square footage of open space area shall be used in the calculation of open space percentage requirements. Vehicle use areas, streets, driveways, and sidewalks required per this LDO may not be used toward open space calculations unless explicitly stated in this section.

1. **Residential Districts.** All new development subject to this section within residential districts as defined in Section 3.1: Residential Districts, shall require minimum open space, calculated from the total size of the development. For the Residential Low Density (RL) zoning district, minimum ten (10) percent open space is required. For the Residential Medium Density (RM) zoning district, minimum twelve (12) percent open space is required. For the Residential High Density (RH) zoning district, minimum fifteen (15) percent open space is

required. The required open space for all residential districts shall also comply with the following additional standards:

- a. **Developments of 0-50 Acres.** For residential developments zero (0) to fifty (50) acres in size, required open space shall include at least one (1) small open space type and one (1) medium open space type, as defined in this section. If the residential development is less than ten (10) acres in size it shall only require one (1) small open space type.
 - b. **Developments Greater Than 50 Acres.** For residential developments greater than fifty (50) acres in size, required open space shall include at least one (1) small or medium open space type and one (1) large open space type, or shall include one (1) small open space type and two (2) medium open space types. At least fifty (50) percent of dwelling units must be within one-half ($\frac{1}{2}$) mile of a medium or large park.
- 2. Mixed-Use Districts.** All new development subject to this section within mixed-use districts as defined in Section 3.4: Mixed-Use Districts, shall require a minimum fifteen (15) percent open space, calculated from the total size of the development. The required fifteen (15) percent open space shall also comply with the following additional standards:
- a. **Less Than 25 Acres.** For mixed-use developments less than twenty-five (25) acres, required open space shall include at least two (2) small open space types.
 - b. **25-50 Acres.** For mixed-use developments greater than twenty-five (25) acres, but less than fifty (50) acres in size, required open space shall include at least two (2) small open space types and one (1) medium open space type.
 - c. **Greater Than 50 Acres.** For mixed-use developments greater than fifty (50) acres in size, required open space shall include at least three (3) small open space types and two (2) medium open space types.
- 3. Nonresidential Districts.** All new development subject to this section, unless specifically exempted, within nonresidential districts as defined in Section 3.2:

Nonresidential Districts, shall require a minimum five (5) percent open space, calculated from the total size of the development. The required five (5) open space shall also comply with the following additional standards:

- a. **Less Than 25 Acres.** For commercial developments less than twenty-five (25) acres, required open space shall include at least one (1) small open space type.
- b. **25-50 Acres.** For commercial developments greater than twenty-five (25) acres, but less than fifty (50) acres in size, required open space shall include at least one (1) small open space type and one (1) medium open space type.
- c. **Industrial.** Developments within the Industrial zoning district shall not be required to provide open space.

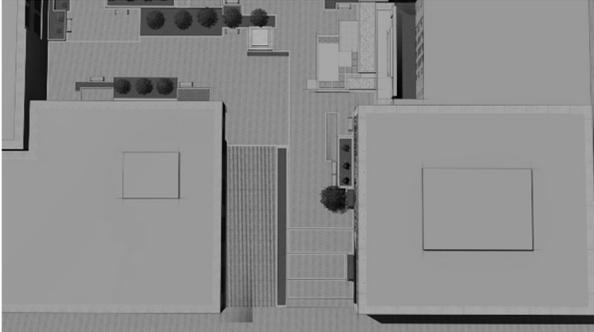
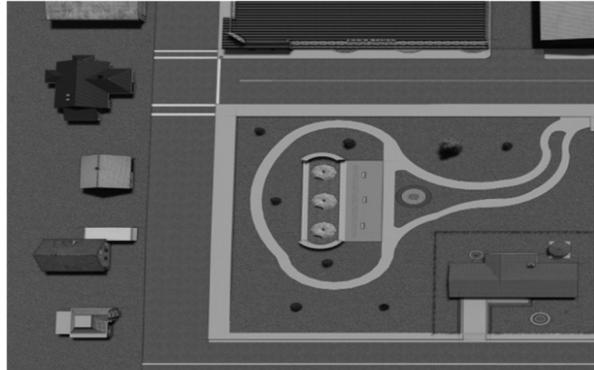
E. **Open Space Sizes.** Open space shall be categorized as small, medium, and/or large. Each open space size has a permitted range of acreage. The acreage calculation for each open space size is defined in Table 6.2.1.1.

Table 6.2.1.1. Open Space (Size/Acreage)

Open Space Size	Acreage (range)
Small	500 SF – 1.0 Acre
Medium	1.0 – 2.5 Acres
Large	2.5 Acres or More

F. **Open Space Types.** In addition to size categorization, open space shall be defined by type. Open space types may be considered more than a single open space size (i.e., an open space type may be considered both a small and medium open space size). Open space types are defined in Table 6.2.1.2.

Table 6.2.1.2. Open Space Types

Open Space Type	Illustrative/Example
<p>Plaza</p> <p>Description: Plazas serve as a gathering place for civic, social, and commercial purposes. The Plaza may contain a greater amount of impervious coverage than any other open space type. Typically located in the front or sides of a building or group of buildings. Plazas shall be partially paved with brick, concrete, permeable pavers, or similar material.</p> <p>Size: Small or Medium</p> <p>Features: Shade structures, seating/benches, tables, including gaming tables, fountains, and public art.</p>	
<p>Pocket Park</p> <p>Description: Pocket parks are primarily landscaped and may provide active or passive recreation. Provides gathering space within a one-quarter mile walking distance of most residents.</p> <p>Size: Small</p> <p>Features: Shade structures, gazebo, seating areas, multi-purpose lawn space, dog park, playground/play space, trail; may also be formed around and include an environmental feature such as a stream, creek, or wetland.</p>	

Amenity Center

Description:

Amenity centers provide recreational opportunities and are typically included in residential developments.

Size:

Small or Medium

Features:

Pools, splash pads, outdoor seating, clubhouse, small scale recreational facilities such as pickleball, soccer, or shuffleboard, and lawn games.



Green

Description:

Greens provide more informal spaces supporting active or passive recreation for neighborhood residents within walking distance. Typically bounded by streets and/or the fronts of buildings.

Size:

Small or Medium

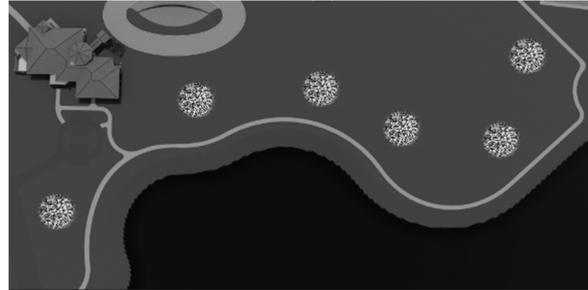
Features:

Shade structures, gazebo, seating areas, multi-purpose lawn space, playground/play space, limited/small scale recreational facilities.



Linear Park/Greenway**Description:**

Linear parks may also be referred to and used as a greenway. Generally provides more informal types of open space; however, may be formalized based on its function (i.e., multimodal trail/connectivity). Typically follows a natural feature including but not limited to a creek, stream, wetland system, or man-made feature natural feature; may also follow streets. Linear Parks may connect other open spaces, as well as neighborhoods.

**Size:**

Medium or Large

Features:

Walking trails, sidewalks, environmental features (wetlands, creeks, streams), shade structures, gazebo, seating areas, multi-purpose lawn space, playground/play space. Man-made lakes and stormwater features be included in this type; however, must be publicly accessible with a trail or sidewalk.

Neighborhood Park**Description:**

Neighborhood parks provide formal and/or informal active and passive recreational activities to residents and the community.

Size:

Medium or Large

Features:

Shade structures, gazebo, seating areas, multi-purpose/sports fields, pools, great lawn playground/play space, natural environments, and plantings. Man-made lakes and stormwater features be included in this type; however, must be publicly accessible with a trail or sidewalk. At least 25% of the park area shall be dedicated to active recreation purposes such as playgrounds, tennis courts, pickleball, ball fields, or similar activities.



Square**Description:**

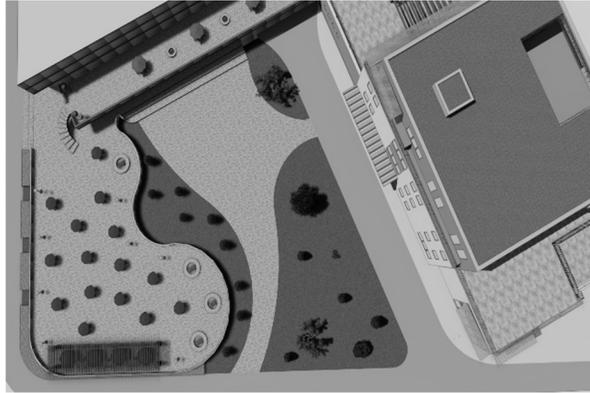
Squares are small to medium in scale; serve as a more formal open space for gathering for civic, social, and commercial purposes. Squares are bordered by vehicular right-of-way (public and/or private), which, together with building frontages, creates its definition and boundaries.

Size:

Small or Medium

Features:

Shade structures, gazebo, seating areas, multi-purpose lawn space, playground/play space, sidewalks, or other pedestrian facilities.

**Active Use Area****Description:**

Active use areas are a small open space. Active use areas are primarily intended to allow for pedestrian activity and provide attractive, safe, and functional environments for the gathering of people, eating and drinking, and small scale outdoor uses in an urban environment. Active use areas may include outdoor dining, small outdoor music venues, or flexible urban space.

Size:

Small

Features:

Outdoor dining facilities, shade structures, seating areas, pedestrian facilities.



G. Open Space Design Standards. The design and incorporation of open space in a development shall comply with the following standards:

1. **Evenly Distributed.** Open space shall be, to the maximum amount practicable with respect to environmental considerations and subdivision design, evenly distributed throughout the development.

2. **Consolidation.** Required open space requirements shall not be consolidated to meet the standards of this section. It is the intent of this section to require multiple open space types of varying sizes in each development where required.
3. **Distance.** No two open space types shall be adjacent or within one hundred (100) feet of each other. Active use areas are exempted from this standard.
4. **Accessible.** Open space shall be located and designed to be easily accessible for residents and/or users of the development. Open spaces shall make accommodations to provide universal designs that can be enjoyed by different target users and provide for ADA accessibility.
5. **Public Seating.** Public seating shall be required. Public seating shall be appropriate to the intended use of the park area (i.e., benches may be appropriate for active spaces; Adirondack chairs and landscape terraces may be appropriate for passive spaces).
6. **Receptacles.** Refuse and recycling receptacles are required at each entrance and gathering space.
7. **Stormwater.** A maximum fifty (50) percent of total required passive open space may be stormwater facilities. Any stormwater facility used toward that requirement shall be publicly accessible through improved or primitive trail. For this section, improved and primitive trails are defined below:
 - a. **Improved Trail.** An improved trail shall be defined as a clearly marked, paved, impervious trail.
 - b. **Primitive Trail.** A primitive trail shall be defined as an unpaved, pervious trail that consists of mulch, crushed stone, or similar material.
8. **Environmentally Sensitive/Unique Lands and Floodplains.** A maximum twenty (20) percent of total required passive open space may be environmentally sensitive or unique lands such as wetlands, protected stream buffers, rock outcroppings, and floodplains.
9. **Ponds and Lakes.** A maximum of five (5) of total required passive open space may be ponds and lakes not associated with stormwater retention if at least twenty-five (25) percent of the shoreline is a public edge, and public access is provided that is equivalent to the access provided to private landowners around the lake.

10. **Parking.** A limited amount of parking spaces may count toward open space requirements as defined below.
- a. **Small.** Small open spaces shall not count any parking as part of its open space calculation.
 - b. **Medium.** Medium open spaces may count up to five (5) parking spaces as part of its open space calculation.
 - c. **Large.** Large open spaces may count up to ten (10) parking spaces as part of its open space calculation.
11. **Multi-Phased Developments.** In multi-phased developments, open space shall be provided for each phase in an amount sufficient to satisfy the open space requirements for the subject phase of development and all preceding phases of development.
12. **Active and Passive Features.** A minimum of fifty (50) percent of all required open space shall be dedicated and designed to allow for active recreation features. For example, a fifty (50) acre residential development requires, at minimum, five (5) acres of land dedicated to open space. Of that five (5) acres, a minimum fifty (50) percent (e.g., 2.5 acres) shall be dedicated for active features. Active recreation and passive features are identified in Table 6.2.1.3.
- a. Active recreation is defined as recreational features, often requiring equipment and taking place at prescribed places, sites or fields, which allow for the active recreational needs of residents or users of the development which they serve.
 - b. Passive recreation is defined as recreational features that do not require prepared facilities like sports fields or pavilions and require minimal disruption to a site. These include such activities as walking paths and other features defined in Table 6.2.1.3.

Table 6.2.1.3. Active and Passive Features

Active Features	Passive Features
Lawn Games and Concrete Gaming Tables	Walking Trails
Hard Courts (Pickleball, Tennis, Etc.)	Boardwalks
Playgrounds	Pollinator Gardens or Other Gardens
Swimming Pools and Splash Pads	Greens
Athletic Fields (Soccer, Baseball, Etc.)	Picnic Areas
Clubhouse, Pavilions, Amenity Centers	Lakes and Ponds
Exercise Facilities	Lawns and Natural Areas
Plazas	Greenways

H. **Ownership of Open Space.** Open space is intended to remain under private ownership while still being available for public use by residents and users of a development.

Ownership of open space shall remain with the owner of the land unless one of the following circumstances exist:

1. **Homeowners Association (HOA)/Property Owners Association (POA).** Open space may be owned in common by the owners of a development through a recognized homeowners association (or similar ownership association).
 2. **Nonprofit.** Open space may be conveyed to a nonprofit organization (i.e., a conservation ground, land trust, etc.) for management. The nonprofit shall be required to manage and maintain the open space.
 3. **Dedication.** Open space may be dedicated to the town during the review process if an agreement is made between the applicant and town. The town shall have final authority on which lands are dedicated to the town.
- I. **Maintenance of Open Space.** The owner of open space shall be required to maintain the open space. This shall include regular maintenance of vegetation as well as infrastructure components (stormwater facilities, paths, impervious surfaces, amenities, etc.). Failure to maintain the open space in the condition in which it was approved will result in code enforcement action and potential penalty by the town.
- J. **Greenways.** Consistent with the adopted comprehensive plan, Rolesville Parks and Recreation Master Plan, and other adopted town plans, greenways are recreational and

transportation corridors that connect people to the places they want to go and provide recreational and fitness opportunities. Greenways are understood to preserve and create open space, encourage physical fitness, provide alternative means of transportation, create opportunities for outdoor recreation, and provide connectivity between open spaces, schools, cultural sites, neighborhoods, and other commuter destinations. Where land is designated as part of the town’s adopted greenway system, development shall comply with the town’s adopted plans and include the creation of new greenway trails. New development may also provide additional greenways and/or connections to greenways in accordance with the standards of this section.

1. **Greenway Dedication.**

- a. Land that is dedicated in fee-simple interest for the purpose of a greenway shall be credited toward density calculations.

2. **Greenway Design.**

- a. All greenways shall include a multi-use path of a minimum of ten (10) feet wide within a dedicated right-of-way or public easement of at least fifty (50) feet. Greenways shall be wide enough to accommodate a variety of pedestrian mobility, including walkers, hikers, joggers, and bicyclists. An alternative may be granted to reduce the minimum easement of at least fifty (50) feet to thirty (30) feet if site constraints including topography and/or environmental features do not allow for a fifty (50) easement. Cost shall not be considered a site constraint.
- b. Greenway connectors shall be a minimum of ten (10) feet wide.
- c. Where land is designated as part of the town’s adopted greenway system, a comprehensive greenway and trail plan demonstrating compliance with this section shall be required.
- d. Sidewalks shall not be constructed in place of required greenways.

3. **Timing.** Greenways shall be constructed in conjunction with required improvements (i.e., streets and sidewalks) for any approved phase of a subdivision or development.

4. **Connectivity.** Connections shall be provided to other greenways whether or not a connection is shown and/or required on the Recreation Master Plan and/or other adopted town plans.

5. **Topography.**

- a. Greenways and connectors shall be Americans with Disability Act compliant where applicable;
 - b. Greenways and connectors shall be designed to fit the contours of the land;
 - c. Greenways shall minimize removal of significant trees (see Section 6.2.4.5: Vegetation Preservation).
6. **Accessibility.** All greenways shall be designed to accommodate a variety of users including walkers, joggers, cyclists, and similar modes of pedestrian movement.
 7. **Paving.** Greenways shall be improved trails of impervious materials.
 8. **Public Access.** All greenways and greenway connectors shall be maintained for public access by the owner, whether by easement or by public dedication.
 9. **Amenities.** For land designated as part of the adopted greenway/bikeway system, greenways shall provide basic amenities for all targeted users. Such greenways shall provide at least three (3) of the following: Drinking fountains, restrooms, trash receptacles, benches, bicycle racks, and shade structures. Way station facilities may also be considered for greenways. These facilities may also include small buildings/kiosks containing exhibits and/or minor food provisions. Land not designated as part of town's adopted greenway/bikeway system is not required to meet this requirement.
 10. **Open Space Considerations.** Land area dedicated as a greenway shall be credited towards applicable open space percentage requirements in this section. Greenways are a passive feature.

6.2.2. BUFFERING

6.2.2.1. PERIMETER BUFFERS

- A. **Purpose and Intent.** This section defines the minimum required perimeter buffering standards. These standards intend to minimize potential nuisances, such as noise, pollution, lights, and buildings or parking areas through physical and visual separation between land uses in separate zoning districts.
- B. **Applicability.** All new development shall comply with the standards of this section. The following shall also apply in instances of repairs, renovations, or additions. No permit for construction of any building, structure or use may be issued until buffering has been provided in accordance with this Land Development Ordinance (LDO).
1. **Repair or Renovation.** A building may be repaired or renovated without requiring buffering per the requirements of this LDO provided there is no increase in gross floor area.
 2. **Minor.** When a building or site is increased in gross floor area or improved site area by ten (10) percent or less, buffering is required only for the additional floor area or improved site area. Improved site area shall include site improvements such as utility installations, landscape modifications, additional impervious surfaces (including parking), and/or construction of structures.
 3. **Major.** When a building or site is increased in gross floor area or improved site area by greater than ten (10) percent, both the additional area and existing area must conform to the buffering standards in this LDO. Improved site area shall include site improvements such as utility installations, landscape modifications, additional impervious surfaces (including parking), and/or construction of structures.
 4. **Change in Use.** A change in use shall not require compliance with this section, unless if the specific use has a use standard requiring a specific buffer.

C. Perimeter Buffer General Standards.

1. A perimeter buffer (i.e., buffer) area is determined exclusive of any required setback, however perimeter buffers may be in required setback. Buffer areas must be located within the outer perimeter of the lot, parallel to and extending to the lot line. Buffers are understood to be located and measured from the property line.
2. Perimeter buffer areas shall consist of a landscaped buffer intended to mitigate and screen the property from adjacent properties. No buildings, structures, principal, or accessory uses are allowed in the buffer. Only the items identified in Section 6.2.2.1.D: Permitted Items Within Perimeter Buffers, are permitted within the buffer.
3. Perimeter buffers begin at the common property line, immediately abutting the adjacent property. Where there is a perimeter easement (such as a drainage or utility easement) that does not allow for the installation of the buffer, then the required buffer shall be placed as close to the property line, adjacent to the easement, as possible.

D. Permitted Items Within Perimeter Buffers. Required and additional plant materials, fences, walls, and berms are permitted in a buffer.

1. **Plant Material.** Required plant material, including ground cover and lawn grasses, shall be planted within the buffer. Plant material may be planted parallel to the buffer perimeter or may be meandered for aesthetic purposes. Required plant material may not be clustered and shall be planted in accordance with this section and Section 6.2.4: Landscaping Standards. Buffers may incorporate greater width and additional plant materials. Perimeter buffer type standards are defined in Section 6.2.2.1.E and illustrations of the buffer types are illustrated in Section 6.2.2.1.F.
2. **Fences and Walls.** Required fences and walls shall be installed in accordance with Section 6.5: Fences, Walls, And Berms, and inside the buffer, not along outer perimeter, and boundary line. Required plant material shall be installed in front of any required fence so the required plant material is completely visible from the adjacent property or right-of-way and meet the standards of this LDO.

3. **Berms.** Berms shall be installed in accordance with Section 6.5: Fences, Walls, And Berms, and the highest point of the berm shall exist in the middle of the required buffer. Any required fence or wall shall be installed at the highest point of the berm. Required plant material shall be installed in front of any required fence or wall, alongside the outer perimeter of the buffer, along the property line within the buffer and meet the standards of this LDO.

E. **Perimeter Buffer Types.** Table 6.2.2.1 provides four (4) different buffer types.

Table 6.2.2.1. Perimeter Buffer Types Table

	Type 1	Type 2	Type 3	Type 4
Min. Width	10'	15'	25'	50'
Min. Canopy Trees	3	3	4	8
Min. Understory Trees	1	1	2	4
Min. Shrubs	40	50	60	Hedge
Min. Fence	6'	6'	N/P	N/P
Min. Wall	N/R	N/R	6'	3'
Min. Berm	N/R	N/R	N/R	5'

Note:
 Measurements provided are per 100 linear feet.

Additional Standards
 Trees and plants may be clustered provided a maximum 10' gap between plantings is maintained.
 Minimum shrubs and hedges may be double staggered.

The above standards are the minimum standards required, enhanced landscape and buffer standards may be provided.

For example, a wall may be substituted for a fence and / or additional landscape materials may be installed.

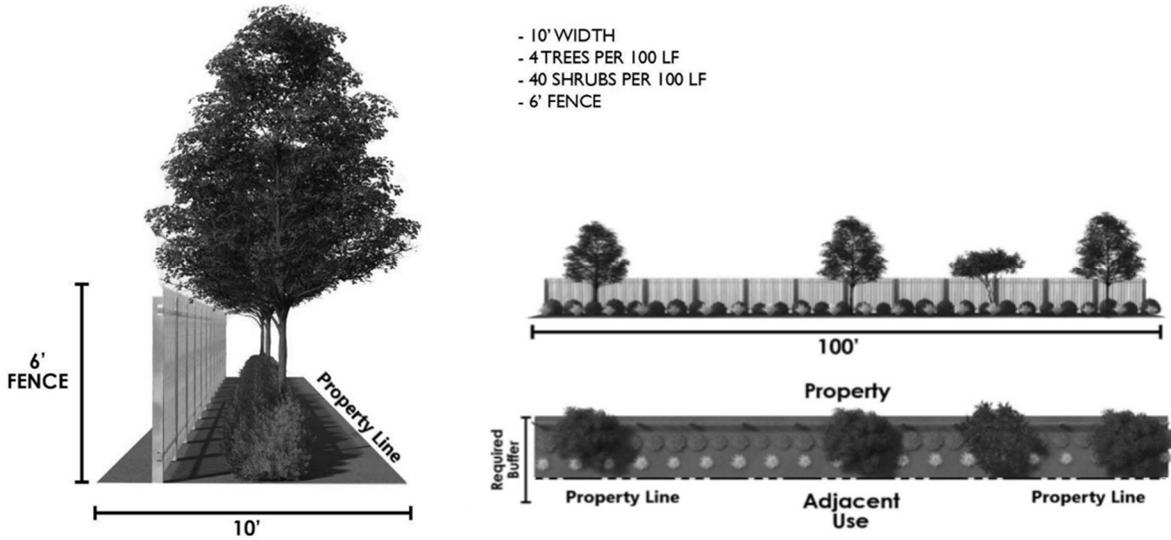
The placement of fences shall ensure all required planting materials are located between the fence and the property line. However, canopy trees may be on both sides of a wall if a minimum one half of required canopy trees are in front (property line).

Placement of required items in the buffer may be in the full width of the buffer.

Key:
 "N/R" = Not Required "N/P" = Not Permitted "Min" = Minimum

F. **Perimeter Buffer Types.** The following images show an example of buffer types defined in Table 6.2.2.1.

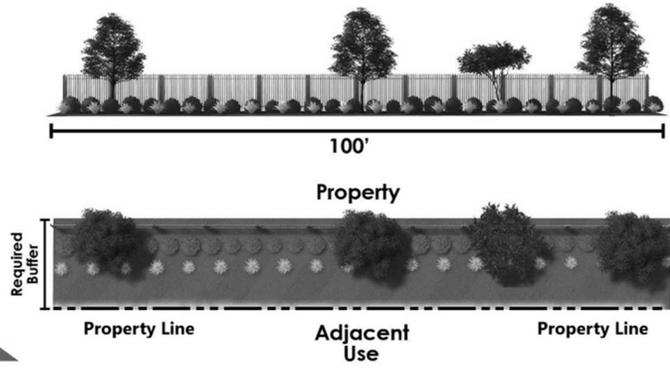
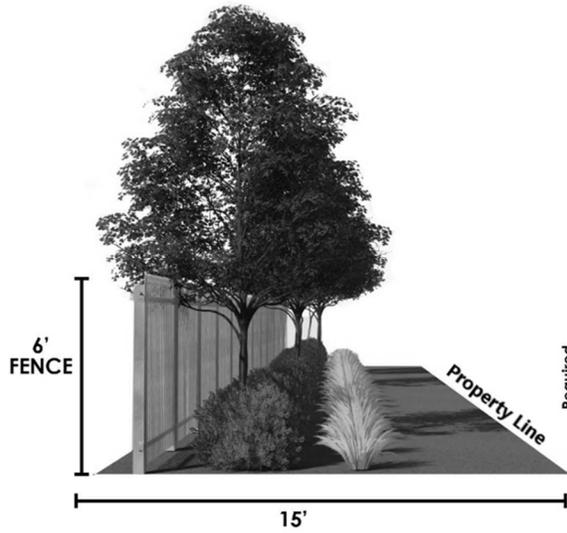
1. **Perimeter Buffer Type 1**



- a. Where shown in Table 6.2.2.2., Perimeter Buffer Type 1L denotes landscape materials only; a fence is not required.

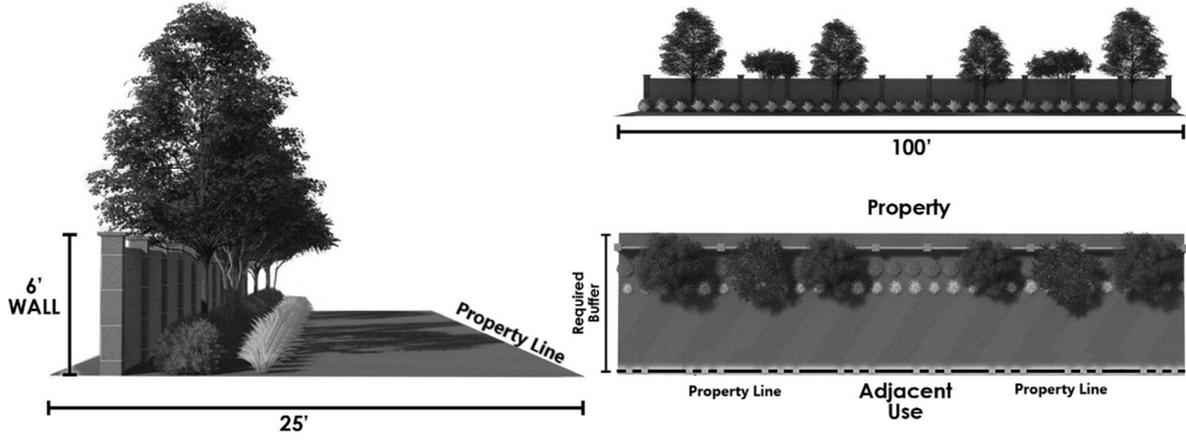
2. Perimeter Buffer Type 2

- 15' WIDTH
- 3 TREES PER 100 LF
- 1 UNDERSTORY TREE PER 100 LF
- 50 SHRUBS PER 100 LF
- 6' FENCE

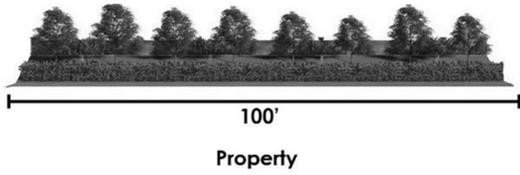


3. Perimeter Buffer Type 3

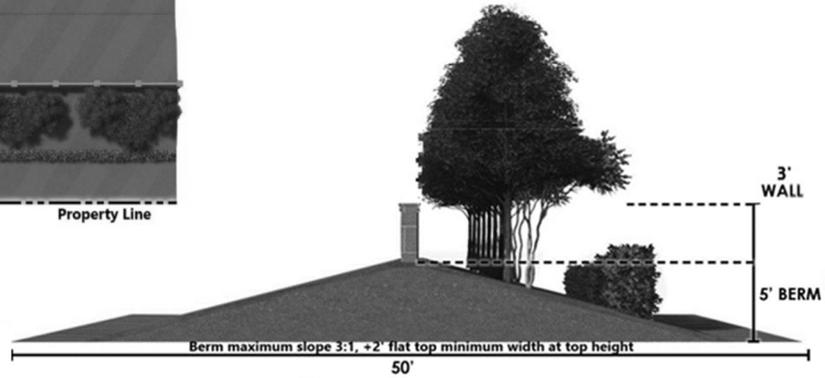
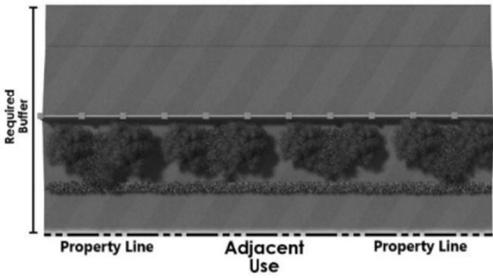
- 25' WIDTH
- 4 TREES PER 100 LF
- 2 UNDERSTORY TREE PER 100 LF
- 60 SHRUBS PER 100 LF
- 6' WALL



4. Perimeter Buffer Type 4



- 50' WIDTH
- 8 TREES PER 100 LF
- 4 UNDERSTORY TREE PER 100 LF
- CONTINUOUS HEDGE
- 3' WALL
- 5' HIGH BERM



G. Required Perimeter Buffer by District

1. **Required Perimeter Buffer.** Table 6.2.2.2: Required Perimeter Buffer by District, shall control the required perimeter buffer type required between zoning districts. While Table 6.2.2.2 is intended to provide for buffers based on zoning district, the Land Development Administrator may take into consideration existing and proposed uses to achieve the intent of this section.
2. **Determination of Required Perimeter Buffer.** To determine the perimeter buffer type required, identify the zoning district of the land in which a development is proposed. Using Table 6.2.2.2, the intersection of the row associated with the district of the proposed development and the column associated with the adjacent zoning district shows the buffer type required.
3. **Standards.** Buffer types required shall comply with the standards defined in Table 6.2.2.1: Perimeter Buffer Types Table.

Table 6.2.2.2. Required Perimeter Buffer by District

Zoning District of Adjacent Property	RL	RM	RH	MH	GC	CH	OP	BT	GI
RL	1L	2	3	3	3	3	3	3	4
RM	2	1L	3	3	3	3	3	3	4
RH	3	3	1L	2	2	2	2	2	4
MH	3	3	2	1L	2	2	2	2	4
GC	3	3	2	2	N/A	1L	1L	1L	4
CH	3	3	2	2	1L	N/A	1L	1L	4
OP	3	3	2	2	1L	1L	N/A	3	4
BT	3	3	2	2	1L	1L	3	N/A	3
GI	4	4	4	4	4	4	4	3	N/A

H. Mixed-Use Perimeter Buffers. Mixed-use districts, as identified in Section 3.4: Mixed-Use Districts, shall comply with the standards in 6.2.3: Mixed-Use Perimeter Compatibility, for compatibility along perimeters of a mixed-use district.

6.2.2.2. STREET BUFFERS

A. Purpose and Intent. Street buffers are required to enhance development along the town's street rights-of-way and intend to:

1. Enhance pedestrian enjoyment of the town and provide shade for streets and sidewalks;
2. Enhance the town's "sense of place".
3. Enhance property values by enhancing the aesthetic character of the town's streets; and
4. Provide areas for vegetation and fauna.

B. Applicability. Streetscape buffers are required on all thoroughfares, collectors, and local streets as shown on the adopted land use plan and/or thoroughfare map. Streetscapes are to remain undisturbed except where no existing vegetation is present. All uses which require site plan approval or preliminary plat approval shall preserve, install, and maintain a planted streetscape along each thoroughfare it abuts which protects the existing vegetation and abuts the perimeter of the property. All streetscape plantings, including the installation of all plant materials, shall conform in accordance with the specifications of this section.

C. Exemptions. Street buffers shall not be required along private drives, driveways, alleyways, or single lot infill within existing residential subdivisions.

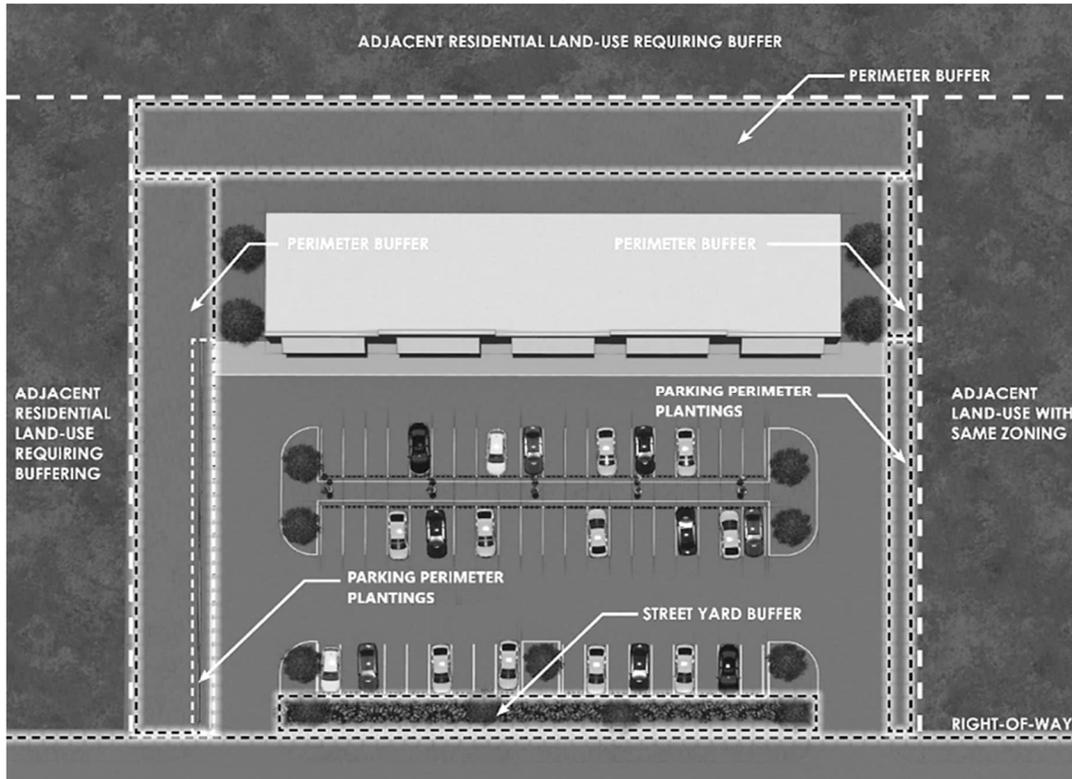
D. Standards.

1. The width of the streetscape buffer shall be at least thirty (30) feet for thoroughfares, fifteen (15) feet for collectors, and ten (10) feet for local streets as measured from the right-of-way line.
2. If the streetscape is disturbed or non-vegetated, the property owner or developer shall install and maintain the following vegetation every forty (40) linear feet of frontage. Along collector streets, this vegetation may be installed up to every fifty (50) linear feet of frontage. Along local streets, this vegetation may be installed up to every sixty (60) linear feet:
 - a. One (1) street tree of two (2) and one-half (1/2) inches in caliper; or,

- b. Two (2) understory ornamental type trees one-and-one-half (1.5) inches in caliper (this option is used only with overhead utility lines).
 - c. Small trees shall be located under overhead power lines. Such small trees shall be at least one-and-one-half (1.5) inches in caliper at the time of installation and two such trees shall be installed or maintained for every forty (40) linear feet of streetscape, rather than one (1) larger tree per forty (40) feet required above.
 3. Trees shall not be planted between curb and sidewalk (a grass strip is required). Trees shall be installed on the thoroughfare side of any berm or screen planting no less than ten (10) feet from the right-of-way of the thoroughfare. Street trees may be installed in a linear fashion or in clusters or groupings of larger and/or small trees in combination with associated plantings to enhance the visual appearance of the streetscape and views from adjacent properties.
 4. Each large canopy tree in the streetscape shall be provided with at least three-hundred-and-fifty (350) square feet of pervious ground area for root growth. Any planting area bounded by an impervious surface shall be at least ten (10) feet wide.
 5. All slopes steeper than two (2) to one (1) shall be stabilized with permanent slope retention devices or a suitable combination of plantings and retention devices.
 6. Where there is a vehicular use area between the right-of-way of the thoroughfare and a permanent building, the streetscaping shall provide a semi-opaque screen or barrier between the right-of-way and the vehicular use area. The screen or barrier may consist of existing vegetation, plants, earthen berms, decorative entry fences (not privacy), walls or any combination thereof which meets the following requirements:
 - a. The screen shall occupy the entire (100 percent) length of the vehicular use area except for sidewalks and driveways. All vehicular use areas must be screened from off-site view. Plant material shall be at least two (2) feet in height above the root balls at the time of installation and must reach a height of at least three (3) feet within three (3) years.

- b. Berms may be installed in lieu of or in addition to plantings. If the berm does not meet the performance standards of this section, then plant materials shall be installed which meet these standards. The installation of additional plant materials is encouraged to enhance the visual and aesthetic qualities of the streetscape.

Figure. 6.3.2.2. Buffer Demonstration Illustration



E. Buffers Along Fully and Limited Controlled Access Highways.#

1. All properties adjacent to a fully controlled access highway or a limited access highway shall install and maintain a vegetated buffer along each controlled access highway, if any, which abuts the property.
2. All buffer plantings shall perform in accordance with the specifications of this section.

3. A one hundred (100) foot undisturbed buffer width is required along all fully and limited controlled access highways, measured from the ultimate right-of-way.
4. No development shall be allowed within required buffers; however, the Board of Commissioners may, permit the construction of a street, driveway, or utility easement in the buffer upon finding by the Board of Commissioners that such construction is necessary for safe ingress, egress, or utility service to the site. The nature and limits of such construction must be designated on an approved site plan, subdivision plan, or public street dedication map.

6.2.3. MIXED-USE PERIMETER COMPATIBILITY

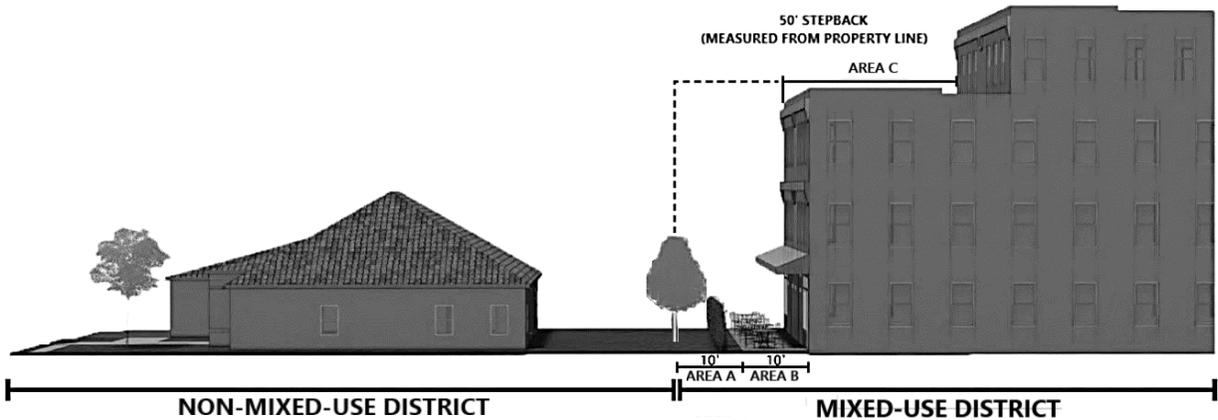
- A. **Intent.** Recognizing that Mixed-Use Districts abut General Use Districts throughout the town, it is the intent of this section to promote compatibility between within and between these areas.
1. These standards only apply when the Mixed-Use development's peripheral yard abuts the adjacent potentially incompatible use or district.
 2. These standards apply to those uses and buildings located at the perimeter of the mixed-use district and not internal to the district.
 3. There are no additional buffering requirements if a public right-of-way of at least fifty (50) feet in width separates the uses.
 4. This section identifies "compatibility transition areas" which are intended to provide greater predictability by minimizing potential incompatibilities.
 5. The area of compatibility transition areas shall be provided within the Mixed-Use district.
 6. The standards in this section may be modified based on the type of lot in which the standard is being applied (i.e., shallow lot) as defined in sub-section D below.
- B. **Compatibility Transition Areas.** Figure 6.2.3.1 illustrate the locations of a respective Mixed-Use district "compatibility transition areas", and a general use district (note, the dimensions noted in these figures are for illustrative purposes only; the specific dimensions and requirements for each area are provided in the following sections and may also vary if a property is defined as a "shallow" lot.

Compatibility Transition Area A = "Buffer"

Compatibility Transition Area B = "Use Restriction"

Compatibility Transition Area C = "Height and Form"

Fig. 6.2.3.1. Compatibility Transition Areas Graphic



1. Compatibility Transition Area A: Buffer

- a. **Intent.** Consists of a landscaped buffer intended to buffer and screen the general use district from the Mixed-Use district. No buildings, structures, principal, or accessory uses are allowed in the buffer other than permitted in this subsection.
- b. **Location.** Begins at the common property line, immediately abutting the Mixed-Use district boundary line and the adjacent property.
- c. **Width.** Consists of a minimum ten (10) feet landscaped buffer, with one (1) canopy tree per thirty (30) linear feet of the boundary line.
- d. **Elements Permitted Within the Buffer**
 - i. Landscaping
 - ii. Open spaces (plazas, parks, commons)
 - iii. Swales, low impact/bioretenion facilities.
- e. **Design and Installation**
 - i. Required landscaping in a buffer yard must meet the design and installation requirements of this LDO.

2. Compatibility Transition Area B: Use Restriction

- a. **Intent.** Compatibility Transition Area B shall be occupied by open areas and/or low intensity uses, such as surface parking, alleys, landscaping, active use areas, outdoor dining, and limited service-related structures. Primary uses and accessory uses shall not be permitted in Area B unless expressly permitted in this subsection.
- b. **Location.** Begins at the edge of the protective yard of Area A and extends towards Area C and / or the primary structure(s).
- c. **Width.** Shall be a minimum ten (10) feet in width.
- d. **Permitted Uses/Activities:**
 - i. Yard – One (1) tree every thirty (30) linear feet.
 - ii. Garden, park, open space.
 - iii. Outdoor dining.
 - iv. Enclosed lanai/porches.
 - v. Path, walkway, sidewalk. A multiuse recreational trail shall not be permitted.

3. Compatibility Transition Area C: Height and Form

- a. **Intent.** Compatibility Transition Area C is provided to mitigate potential visual nuisances that height may bring and is intended to restrict the height and form of development to decrease the potential impact of new mixed-use multi-story structures on non-mixed-use zoning districts. Transition Area C is achieved through a building step back. The required building step back shall apply to those portions of the building greater than the maximum by right height permitted in the district.
- b. **Location.** Begins at the edge of Area B and extends inward.
- c. **Width.** Measures, from the property line, a minimum of thirty (30) feet inward, subject to the widths of Area A and B

- C. **Form Standards.** The sides and rear facade of the building that faces the general use district shall meet the architectural requirements of Section 6.8: Design Standards, with

respect to windows, architectural features, and transparency requirement.

D. **Shallow Lots.** Recognizing that existing lots of record less than one hundred (100) feet in depth may not be able to meet requirements of this section, a variance may be requested for existing lots of record less than one hundred (100) feet in depth, approved by the Board of Commissioners, to:

1. Reduce the widths of Compatibility Transition Area A, Area B, and Area C by fifty (50) percent; and/or
2. Allow the combination of Area A and Area B to a total of ten (10) feet, provided a six (6) feet tall opaque masonry wall and required landscaping is provided.

6.2.4. LANDSCAPING STANDARDS

6.2.4.1. PURPOSE AND INTENT

A. **Purpose and Intent.** Landscaping standards defined in this section intend to improve the appearance of the town. This section is intended to enhance, rather than inhibit economic development. The use of landscaped and maintained areas can reduce incompatibilities of adjacent land uses and promote and enhance community character.

The standards outlined in this section are designed to:

1. Increase the compatibility of adjacent uses;
2. Reduce excessive heat, glare, and accumulation of dust;
3. Lessen visual pollution;
4. Promote water conservation;
5. Allow for greater environmental stewardship of resources;
6. Ensure landscape yards and screening to reduce the negative impacts of noise, trash, odors, lack of privacy and visual appearances that occur in higher intensity land uses;
7. Safeguard the public health, safety, and welfare; and
8. Ensure the appearance of the town contributes positively to its growth and economic prosperity.

B. **Applicability.** All new development shall comply with the standards of this section. The following shall also apply in instances of repairs, renovations, or additions. No permit for construction of any building, structure or use may be issued until buffering has been provided in accordance with this LDO.

1. **Repair or Renovation.** A building may be repaired or renovated without requiring buffering per the requirements of this LDO provided there is no increase in gross floor area.
2. **Minor.** When a building or site is increased in gross floor area or improved site area by ten (10) percent or less, buffering is required only for the additional floor area or improved site area. Improved site area shall include site improvements

such as utility installations, landscape modifications, additional impervious surfaces (including parking), and/or construction of structures.

3. **Major.** When a building or site is increased in gross floor area or improved site area by greater than ten (10) percent, both the additional area and existing area must conform to the buffering standards in this LDO. Improved site area shall include site improvements such as utility installations, landscape modifications, additional impervious surfaces (including parking), and/or construction of structures.
4. **Change in Use.** A change in use shall not require compliance with this section, unless if the specific use has a use standard requiring a specific landscape buffer.

6.2.4.2. LANDSCAPE PLAN AND REVIEW

A. **Landscape Plan.** All development applicable under this section shall submit and receive approval of a landscape plan from the Planning Department, as required to be included in a site plan. Detail shall be provided on the plan showing the required landscaping within a one hundred (100) linear foot section of any buffer. Species of trees and shrubs shall be chosen from the approved plant list, as defined in Section 6.2.4.7: Landscape/Planting Guidelines. Preservation of existing vegetation is encouraged and may be used to meet requirements of this section. A landscape plan shall include the following:

1. Title of project;
2. Dimensions, scale, and north arrow;
3. All required open space shown on the plan;
4. Indigenous or native vegetation;
5. All landscaped areas;
6. Identify all LDO required landscaping;
7. Vehicle use areas including parking, aisles, and driveways;
8. Roadways and access points;
9. Plant spacing and native status;

10. Preservation plan;
 11. Overhead and underground utilities; and
 12. A tree and/or vegetative survey
- B. **Installation.** All landscaping shall be completed in accordance with approved site plan and the standards of this section. Required landscaping shall also comply with the following standards:
1. A certificate of occupancy shall not be issued, until all required plant materials have been placed in accordance with the approved landscape plan and requirements of this section.
 2. A temporary certificate of occupancy may be issued for a period of 30 to 180 days under circumstances that would affect the installation of required plant material, or until the proper planting season is reached, to complete the requirements of this section.
 - a. In cases where a temporary certificate of occupancy is requested, the applicant shall furnish the following: A signed contract for the installation of all required landscape materials and a performance guarantee for the contract. Reasons to grant a temporary certificate of occupancy may include unavailability of plant species, unusual environmental conditions, or inappropriate planting season.
- C. **Inspections.** The Land Development Administrator shall inspect landscaping prior to the issuance of a certificate of occupancy (unless a temporary certificate of occupancy or certificate of compliance has been granted). An as-built plan shall be provided to the town for landscaping improvements required per the site plan.
1. The Land Development Administrator shall inspect the site one year after the issuance of the certificate of occupancy to ensure compliance with the approved site plan.
- D. **Multi-Phase Development.** Multiple family, nonresidential, and mixed-use development that is planned and developed in phases shall install landscaping that is associated with the active phase or phases only, unless an alternative arrangement is otherwise agreed

to. An active phase of a development is the one that is subject to permitted and on-going development activity.

6.2.4.3. LANDSCAPING STANDARDS

A. General Standards.

1. **Plant Species.** All species of trees and shrubs used in required buffers shall be chosen from the approved plant list as defined in Section 6.2.4.7: Landscape/Planting Guidelines.
2. **Canopy Trees.** Canopy trees must be a minimum of eight (8) feet in height and two (2) inches in caliper at time of installation and reach an expected height of at least thirty (30) feet. In lieu of any requirement for a canopy tree, two (2) understory trees may be planted.
3. **Understory Trees.** Understory trees must be a minimum of eight (8) feet in height and one (1) inch in caliper at time of installation.
4. **Shrubs.** Shrubs shall reach a minimum height of thirty (30) inches and spread of thirty (30) inches within three years of planting.
5. **Minimum/Maximum Percentages.** When twenty (20) or more canopy or accent trees are required to be planted on a site to meet the standards of this LDO, a mix of genera shall be provided as follows:

Table 6.2.4.3. Minimum/Maximum Percentage

Total Trees Planted on Site	Minimum Number of Genera Required	Maximum Percentage of any Genera
20 or less	1	Not applicable
21-50	2	60 percent
51-100	3	50 percent
101 or more	4	40 percent

6. **Fences/Walls.** Fences and walls shall be constructed of high-quality materials including brick and stone, stucco over concrete masonry blocks, treated wood, wrought iron/aluminum, composite fencing, or PVC vinyl. The finished side of

the fence shall face the adjoining property. Fences/walls shall be placed at the rear of a buffer, so the adjoining property benefits from the view. No fence/wall shall exceed eight (8) feet in height unless explicitly permitted elsewhere in this LDO. All fences and walls shall comply with the standards of Section 6.5: Fences, Walls, and Berms

7. **Berms.** Berms shall be stabilized and have a slope not exceeding 3:1 (horizontal to vertical) and shall comply with the Standards of Section 6.5: Fences, Walls, and Berms.
 8. **Stabilization.** All required landscaping shall be stabilized and maintained with vegetative cover, mulch, or other approved materials by the Land Development Administrator to prevent soil erosion. Vegetative cover shall be installed and utilized to minimize erosion on all slopes greater than fifteen (15) percent.
 9. **Planters.** If a development provides planters, the following standards shall apply:
 - a. Planters shall be a minimum height of thirty (30) inches.
 - b. Minimum height of plant material in the planter shall be six (6) inches at time of planting.
 - c. Planters shall be constructed of masonry, stone or treated lumber. Other materials may be approved by the Land Development Administrator.
- B. **Maintenance Standards.** The owner of property shall be responsible for protecting and maintaining plant material. Maintenance of plant material shall also comply with the following:
1. All landscaping, including landscaping used for buffers and screening purposes, shall be designed, and maintained according to sound landscape and horticultural practices, and all fences/walls shall be maintained in the condition in which they were originally approved.
 2. All plant material shall be maintained in an attractive and healthy condition.
 3. Dead or diseased plant material shall be removed and replaced.
 4. The responsibility for maintenance of a required buffer shall remain with the owner of the property, or their grantee.

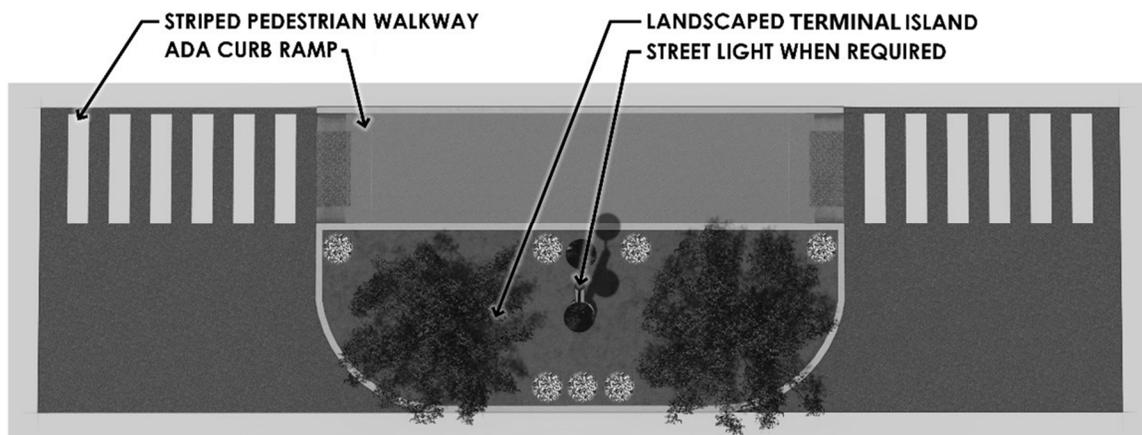
5. In instances where existing plant material has been disturbed or damaged, replacement of plant material shall comply with the below standards:
 - a. Any tree with a caliper of at least eight (8) inches shall be replaced with one (1) or more trees which have a caliper of at least two (2) and one-half (1/2) inches and a cumulative caliper equal to or greater than one half (1/2) of the original tree.
- C. **Easements.** Nothing shall be planted or installed within an underground or overhead utility or drainage easement without town approval and easement holder approval.
- D. **Water Conservation.** Water conservation is recognized as an important component of landscaping standards, environmental stewardship, and promoting more sustainable development practices. The following water conservation standards shall apply:
 1. Where irrigation systems are used, such systems shall be water efficient and utilize WaterSense standards as administered by the United States Environmental Protection Agency (EPA). Irrigation systems shall be controlled with WaterSense approved irrigation controllers, meeting EPA criteria standards.
 2. Irrigation systems shall be operated by an automatic irrigation controller and/or timer, and with a rain sensor.
 3. All required irrigation systems must be designed to minimize the application of water to impervious areas.

6.2.4.4. PARKING LANDSCAPING

- A. **Applicability.** All parking lots serving multiple family, mixed-use, and nonresidential developments shall comply with this section.
- B. **Accessibility.** Nothing in this section shall deny ADA accessibility within parking lots nor deny the placement of crosswalks and sidewalks through parking lots (including terminal islands, interior islands, and divider medians) required for pedestrian safety.
- C. **Parking Lot Landscaping.** Together, the requirements in items D. through G. below shall result in all parking spaces being within sixty (60) feet of the trunk of a canopy tree.
- D. **Parking Terminal Islands Standards.** The following standard shall apply to all terminal islands within parking lots:

1. Each row of parking spaces shall end with terminal islands to separate parking from adjacent drive lanes.
2. Each terminal island shall measure at least eight (8) feet in width by eighteen (18) feet in length, measured from the inside of the curb.
3. Within terminal islands, one (1) large or medium canopy tree shall be required for every one-hundred-and-fifty (150) square feet (or fraction above one half thereof), with a minimum of one large or medium canopy tree required per terminal island. Two (2) understory trees may be used to meet the requirement of this subsection.
4. Terminal islands shall be landscaped with shrubs, accent plants, ornamental grasses, and ground cover, excluding sod, which is planted to provide one hundred (100) percent coverage within two (2) years.
5. Landscaping in islands adjacent to parking spaces shall be set back a minimum of two (2) feet behind the back of the curb to provide for pedestrian access to parked vehicles.
6. Lighting may be installed in parking terminal islands.
7. Parking lots or portions of parking lots not visible from the streets excluding alleys, shall not be required to install terminal islands.

Figure 6.2.4.4.1. Terminal Island Landscaping Illustrative Example



E. Parking Interior Islands Standards. The following standard shall apply to all interior islands:

1. Each interior island shall measure at least eight (8) feet in width by eighteen (18) feet in length, measured from the inside of the curb.
2. The Land Development Administrator may reduce the required width by up to three (3) feet (minimum width five (5) feet) where existing site constraints (e.g., small site) make compliance impracticable or where such reduction will allow preservation of existing trees.
3. Interior islands less than five (5) feet in width, measured from the inside of the curb, shall not be credited towards interior landscaping. Within interior islands, one large or medium canopy tree shall be required for every one-hundred-and-fifty (150) square feet (or fraction above one half thereof), with a minimum of one large or medium canopy tree required per interior island.
4. Landscaping in islands adjacent to parking spaces shall be set back a minimum of two (2) feet behind the back of the curb to provide for pedestrian access to parked vehicles.
5. Lighting may be installed in parking interior islands.

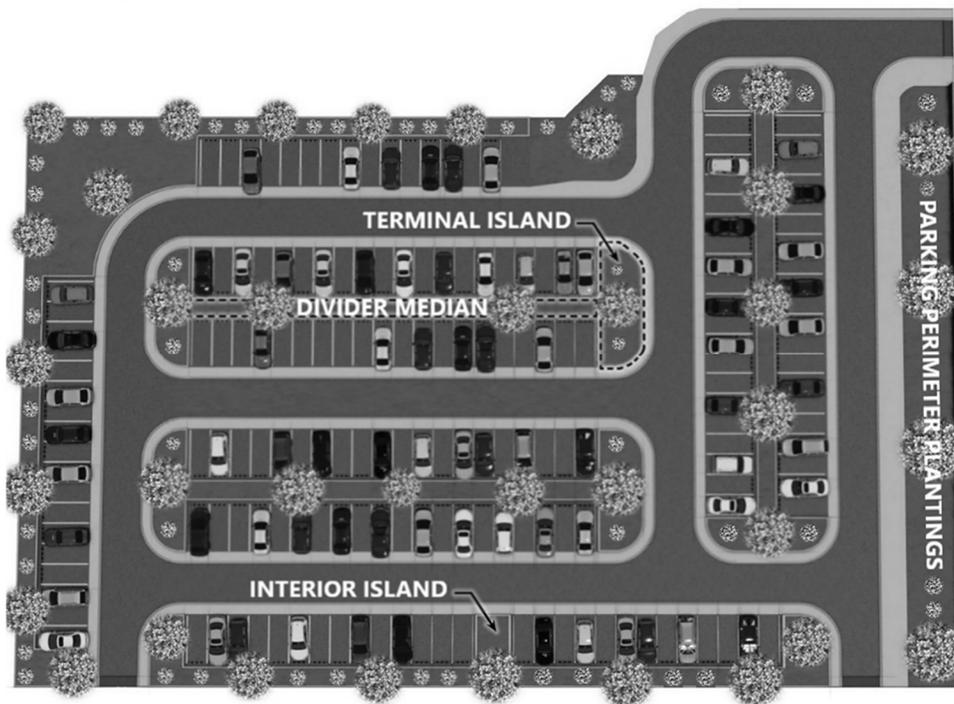
F. Parking Divider Medians Standards. The following standard shall apply to all divider medians:

1. Landscaped divider medians shall form a continuous landscaped strip between abutting rows of parking areas or access drives.
2. The minimum width of a divider median shall be a minimum seven (7) feet, measured from the inside of the curb.
3. One (1) large or medium canopy tree or two (2) small under-story trees shall be required for each thirty (30) linear feet of divider median (or fraction above one half thereof).
4. Shrubs shall be planted in divider medians which separate parking areas from access drives to form a continuous hedge the full length of the divider median.
5. Pedestrian scale lighting must be provided within divider median(s).

G. Parking Perimeter Plantings. Parking perimeter plantings shall be required to enhance the view of a parking lot from abutting streets and abutting properties. Parking perimeter plantings shall be provided on the perimeter of all parking lots. Parking perimeter plantings shall comply with the following standards:

1. Required plant material shall be placed adjacent to the perimeter of the parking lot.
2. Parking perimeter plantings shall consist of a single continuous row of shrubs planted no greater than three (3) feet on-center and within five (5) feet of the parking lot edge.
3. Shrubs used for parking perimeter planting shall be of a minimum height of thirty (30) inches above grade within three years of planting. Shrubs may not exceed a height of four (4) feet and shall be pruned and maintained.
4. Where parking lots are adjacent on different lots, parking perimeter plantings or other forms of screening are not required along the common boundary between the two parking lots. This includes developments configured as a single, unified development.

Figure 6.2.4.4.2. Parking Landscaping Illustrative Example



6.2.4.5. VEGETATION PRESERVATION

A. **Purpose and Intent.** As the Town of Rolesville continues to develop and grow, there is a need for the construction and renovation of buildings, roads, parking lots and other infrastructure. Vegetation preservation and tree protection regulations are necessary to protect desirable trees and plant material and is a vital part of sustainable, community growth. This section intends to:

1. Limit excessive pruning or clear-cutting of existing trees, vegetation, and other landscaping;
2. Provide a uniform standard for the protection and replacement of trees on all property which require any type of development permit;
3. Allow existing trees and vegetation may be counted toward landscaping, buffering requirements and toward preservation standards as required in this LDO;
4. Requires a tree removal permit for the removal of trees;
5. Promote carbon dioxide absorption and oxygen production;
6. Moderate temperature and promote energy conservation;
7. Provide shade; and
8. Protect, facilitate, and enhance the aesthetic qualities of the community to ensure that tree removal does not reduce property values.

B. Preservation Standards.

1. Deciduous and evergreen trees shall be preserved to the greatest extent possible. At least ten (10) percent of all existing trees in good health (as determined by a professional arborist) shall be preserved within developments that are two (2) acres or greater in size, excluding non-native invasive plants as listed by the US Forest Service or the NC Forest Service.
2. Within applicable sites, evergreen trees at least twenty (20) inches diameter at breast height and deciduous trees at least eighteen (18) inches diameter at breast height, and in good health (as determined by a professional arborist), and

within required buffering and landscaping areas, shall be tagged prior to any site clearance and be preserved to the greatest extent possible.

3. In any case where removal of a qualifying evergreen or deciduous tree from subsection (2) is required for site development, it shall be replaced on-site with at least four (4) or more trees of similar species and size.
4. Trees sixty (60) inches diameter at breast height and in good health based upon a professional arborist, must be preserved to the greatest extent possible and not be removed. If removal is required for site development, diameter at breast height shall be replaced one (1) for one (1) using a minimum of three (3) inch caliper trees on site. Existing buffers and canopy may be used for up to twenty-five (25) percent of replacement.
5. Any tree which qualifies as a landmark tree per the Town of Rolesville Tree Board shall be protected; see Section 6.2.5.12: Tree Ordinance Tree Protection.
6. All existing vegetation which meets landscape buffer requirements shall be preserved on the site to the greatest extent possible.
7. Existing vegetation shall be clearly marked on landscape plans.
8. All trees that are to be preserved shall be enclosed with an appropriate, visible fence before grading begins for both site plans and subdivisions. This fence shall be located at a distance determined by the following formula: No less than one (1) foot from the tree trunk for each one (1) inch in tree diameter. For example, fencing is to be placed no less than ten (10) feet from a ten (10) inch diameter at breast height.
9. All tree protection fencing must remain in place throughout the entire site development process until the time a certificate of occupancy is issued.
10. In the case of subdivision development, tree protection fencing must remain in place until all units are completed (received certifications of occupancy) within any designated phase or plat.
11. The critical root zone of each preserved tree must be within the protective yard. Twenty-five (25) percent of the critical root zone may be disturbed.

12. The owner of the property shall be responsible for protecting and maintaining the plants in the designated preservation areas in a healthy, growing condition and for keeping the area free of refuse and debris.

C. **Preservation Plan.** A preservation plan shall be required as part of any landscaping plan submitted to the Land Development Administrator and meet the following standards:

1. The plan must show there will be no disturbance within a critical root zone of trees, as defined in this LDO.
2. A critical root zone shall be protected from encroachment and damage.
 - a. The preferred method is to restrict access by installing a barrier to keep materials, people, or equipment out of the critical root zone, as required in the preservation standards above.
3. Barriers shall be accompanied by temporary signs labeling the critical root zone.
4. The critical root zone area shall remain free of all building materials and debris.
5. The plan shall include a location plan and boundary line survey of the property.
6. The plan shall show the size, location, and species of trees.
7. The plans shall show areas where trees, vegetation, and soils are to be protected and preserved and areas where trees, vegetation, and soil are to be removed or modified. The plan shall graphically identify each tree to be saved or removed.
8. The plan shall demonstrate compliance with all vegetation preservation standards of this section.
9. Once a preservation plan has been approved, no preserved tree shall be removed unless the town determines that there is no reasonable way the property can be otherwise developed, improved, or properly maintained, and the tree itself retained.

D. **Tree Removal Permit.** Any tree removal will require a tree removal permit. No person shall cut, remove, or relocate any trees on any public or private property unless a preservation plan or tree removal permit has been approved. The purpose of a tree removal permit is to provide for a permit for the removal of trees. Tree removal shall

comply with all standards of the LDO and provide information demonstrating compliance with all standards of this section. A request shall be submitted on a form designated by the Planning Department. Only the following activities are exempt from a tree removal permit:

1. The removal of dead or naturally fallen trees;
2. The removal of diseased trees posing a threat to adjacent trees;
3. The selective and limited removal of trees or vegetation necessary to obtain clear visibility within sight distance triangles; and
4. The removal of vegetation by public or private agencies within the lines of any right-of-way, easement, or other town-owned lands as may be necessary to ensure public safety.

6.2.4.6. SCREENING OF SERVICE AREAS AND OUTDOOR DISPLAY/STORAGE

A. **Service Areas to Be Screened.** Service areas and equipment shall be fully screened and out of view from adjacent properties and rights-of-way. Examples of these areas include, but is not limited to:

1. Open-air/outdoor storage;
2. Trash containment areas (i.e., refuse collection, trash containment devices, compactors, dumpsters);
3. Mechanical equipment (i.e., air conditioning units, rooftop mounted equipment);
4. Utility service areas;
5. Loading/unloading areas; and
6. Other similar service function areas

B. **General Screening Design Standards.** Screening shall comply with the following standards unless stated elsewhere in this section:

1. Screening material and design shall be consistent with landscape plan.
2. Screening shall consist of, at minimum:

- a. Landscaping the service area or equipment with a row of understory trees, shrubs, or berms which shall mature to the height necessary to fully screen the area or equipment;
 - b. Utilizing a wall or building wall projection, which complies with the standards of this LDO, which is consistent and compatible with the principal building in terms of texture, quality, material, and color and which is the necessary height to fully screen the area or equipment; or
 - c. Fencing which complies with the standards of this LDO, which is consistent and compatible with the principal building, and which is the necessary height to fully screen the area or equipment.
- C. **Outdoor Display and Storage.** It is the intent of this section to ensure open-air storage areas, including outdoor display and storage, located within one hundred (100) feet of a property line, shall be screened. Outdoor display and outdoor storage shall have specific standards below:
1. **Outdoor Display.** Outdoor display shall be defined for the purpose of this subsection as the outdoor display of products available for sale, including soft drink dispensing machines, propane gas storage racks, ice machines, kiosks, outdoor merchandise, and the like. Approved temporary uses are not considered outdoor display for the purpose of this section. Outdoor display shall comply with the standards below:
 - a. Outdoor display shall be removed and placed in a fully enclosed structure at the end of every business day. Due to their commercial and pedestrian oriented nature, propane storage racks, soft drink dispensing machines, ice storage bins, may remain outside overnight.
 - b. Outdoor display shall not extend more than eight (8) feet. No more than twenty-five (25) percent of the horizontal length of the façade shall have outdoor display items.
 - c. Outdoor display areas shall not inhibit pedestrian travel paths (i.e., sidewalks) and ADA accessibility shall be maintained.

2. **Outdoor Storage.** Outdoor storage shall be defined as either limited outdoor storage or intense outdoor storage. For this subsection, outdoor storage is defined as the outdoor storage of materials, goods, and merchandise.

a. **Limited Outdoor Storage.** Limited outdoor storage includes outdoor storage of merchandise which cannot easily be taken in and out of an enclosed structure as the end of the day, including items such as garden supplies, plants, sporting goods, overnight outdoor storage of vehicles awaiting repair, and storage of fleet vehicles, such as delivery vehicles. Limited outdoor storage is only permitted in the commercial or industrial districts and shall comply with the following standards:

i. Limited outdoor storage is limited to eight (8) feet in height and must be fully screened from the view of any public right-of-way, parking areas and adjacent properties. Fences, hedges, and plant material may be used to screen the limited outdoor storage.

b. **Intense Outdoor Storage.** Intense outdoor storage includes outdoor storage of raw, unfinished goods and materials, often associated with the manufacturing of another good. Common intense outdoor storage items include steel, salvage material, recycle materials, lumber, contractor equipment, and other raw material. Intense outdoor storage is only permitted in industrial districts and shall comply with the following standards:

i. Intense storage shall be located at least twenty (20) feet from any public right-of-way

ii. Intense outdoor storage is limited to eight (8) feet in height and must be fully screened from the view of any public right-of-way, parking areas and adjacent properties. An eight (8) foot fence is required around the perimeter of the outdoor storage area.

D. **Trash Containment Areas.** All trash containment devices (i.e., dumpsters, refuse collection, etc.) shall have additional standards. Trash containment areas shall meet the following standards:

1. Trash containment areas shall be located and designed to not be visible from the view of adjacent streets and properties;
 2. Trash containment devices may not be in any front or street yard;
 3. All trash containment areas shall be enclosed;
 4. The enclosure shall be at least as high as the highest point of the trash containment device or compactor;
 5. The enclosure shall be made of a material that is opaque; and
 6. All trash containment devices shall be placed on a dedicated concrete pad.
- E. **Utility Service Areas.** Utility service areas located outside the public right-of-way must be screened from public view. Screening shall consist of landscaping, fence or wall meeting the design requirements of this section. Screening is not required for utility service areas that are related to emergency services (i.e., fire hydrants).

6.2.4.7. LANDSCAPE/PLANTING GUIDELINES.

- A. **Intent.** It is the intent of this section to ensure that the planting and preservation of all plant materials and plant areas are maintained per the requirements of this section. Locations, quantities, and species are to be provided by a licensed landscape architect and are subject to approval by town staff prior to the commencement of site work.
- B. **Plant Palette.** All plants shall be of native and locally adaptive species (zone 7 according to the USDA Plant Hardiness Zone Map). Town staff may be able to deny or recommend the use of different species if there is little plant diversity or plant species which are known to have common diseases or branching and/or root structures which do not fit within the specified plant location. Plant lists must include at least four (4) different tree species with no one species being greater than thirty-five (35) percent of the palette.
- C. **Plant Diversity.** All developments shall provide a diverse plant palette to promote diverse habitats, fungus, and disease control, as well as enhance the town's natural aesthetic. In developments with multiple roadway alignments, tree species should vary from street to street.
- D. **Planting Season.** It is recommended that all plant material be planted within the fall and/or spring growing seasons. If schedule or weather does not allow for the installation

of the plant material within these windows, a temporary certificate of occupancy may be granted.

- E. **Planting within Easements.** The planting of trees is not allowed within any easement unless otherwise permitted by the town and easement holder. Shrubs may be planted within town owned easements but shall be placed at the property's owner liability.
- F. **Plant Material.** In no case shall a plant species which has been identified as invasive by the *North Carolina Forest Service* be included. For recommended plant species, refer to the *North Carolina Department of Transportation's* list of acceptable plant species as well as the *North Carolina State University Extension Plant Toolbox*.

Table 6.2.4.7. Plant Typologies and General Descriptions

Type	Size / Spread	Other / Notes
Canopy (Large Shade) Trees		
Deciduous Canopy (≥ 35' height; ≥ 30' spread)	3" caliper 12' min. height	Installed along sidewalks in tree lawn / tree pit, parking lots, buffers and may be installed as a building / accent tree
Evergreen Canopy (≥ 18' height; ≥ 25' spread)	3" caliper 12' min. height	Installed along sidewalks in tree lawn / tree pit, parking lots, buffers and may be installed as a building / accent tree
<i>*All multi-stem trees shall have at least 3 stalks with a minimum caliper of 2.5"</i>		
Understory (Small/Medium) Trees		
Deciduous Understory/ Ornamental (≥ 15' height; ≥ 15' spread)	2" caliper 8' min. height	Installed along sidewalks May be installed as screening or accent. May be used to replace canopy tree where overhead utilities are present.
Evergreen (≥ 18' height; ≥ 15' spread)	2" caliper 8' min. height	Planted as a buffer between uses or used as screening or accent.
<i>*All multi-stem trees shall have at least 3 stalks with a minimum caliper of 1.5"</i>		
Shrubs		
Evergreen Shrubs	24" height minimum (unless otherwise required)	
Deciduous / Ornamental Shrubs	18" height minimum (unless otherwise required)	
Perennials	2 gal minimum	
Ornamental Grasses	2 gal minimum	
Ground Cover	1 gal minimum	

6.2.5. TREE ORDINANCE

6.2.5.1. PURPOSE AND INTENT

- A. It is the purpose of this ordinance to encourage well planned, coordinated tree planting improvements for the Town of Rolesville, North Carolina to promote and protect the public health, safety, appearance, and general welfare of the town and its residents by providing for the regulation of the planting, maintenance, and removal of trees, shrubs, and other plants on town owned property and town street rights of way, town easements, and town greenway easements. Sections 6.2.5.10. through 6.2.5.13. apply to town owned and privately owned property.

6.2.5.2. ESTABLISHMENT AND OPERATION OF ROLESVILLE TREE BOARD

- A. The Board of Commissioners for the Town of Rolesville hereby creates and establishes a Rolesville Tree Board, which shall consist of six (6) members. Four (4) members shall be citizens living within the corporate limits of Rolesville and two (2) members shall be residents living within the area of the Rolesville extraterritorial jurisdiction. Members of the board shall serve for two (2) years in a voluntary capacity. The Board shall choose its own officers, consisting of a Chairperson, Vice-Chairperson and Secretary who shall be elected each year by a majority vote of the Tree Board members, make its own rules and regulations, and keep a journal of its proceedings. A majority of the members shall be a quorum for the transactions of business.
- B. Faithful attendance at the meetings is a prerequisite for the maintenance of membership to the Board. Failure to attend three (3) consecutive meetings shall be deemed adequate cause for summary removal on the Tree Board by the Town Board of Commissioners.

6.2.5.3. DUTIES AND RESPONSIBILITIES OF TREE BOARD

- A. It shall be the responsibility of the Board to study, investigate, counsel, develop and administer a written plan for the care, preservation, pruning, planting, replanting, removal or disposition of trees and shrubs, in parks, along streets and in other public areas. Such plan will be presented to the Board of Commissioners and upon their acceptance and approval shall constitute the official comprehensive Town Tree Plan along streets and in other public areas. When requested by the Board of

Commissioners, the Tree Board shall consider, investigate, make finding, report, and recommend upon any special matter of question coming within the scope of its work.

6.2.5.4. REVIEW BY TOWN BOARD

- A. The Town Board of Commissioners shall have the right to review the conduct, acts, and decisions of the Town Tree Board. Any person may appeal any ruling or order of the Town Tree Board to the Town Board of Commissioners who may hear the matter and make final decision.

6.2.5.5. TREE SPECIES TO BE PLANTED

- A. It shall be the responsibility of the Tree Board to make a list of tree species that may be planted along streets and in other public areas. The list shall include specific trees in the small, medium, and large category. No other species than those specified shall be planted on public property without written permission from the Town Board of Commissioners.

6.2.5.6. SPACING

- A. No trees may be planted closer together than the following: small trees, fifteen (15) feet; medium trees, twenty-five (25) feet; and large trees, thirty-five (35) feet; except in special plantings designed or approved by a landscape architect.

6.2.5.7. DISTANCE FROM CURB AND SIDEWALK

- A. No trees may be planted closer to any curb or sidewalk than the following: small trees, two (2) feet; medium trees, three (3) feet, large trees, four (4) feet.

6.2.5.8. DISTANCE FROM CURB AND SIDEWALK

- A. No trees may be planted closer than thirty-five (35) feet of a street corner, measured from the point of nearest intersecting curbs or curb lines. No street tree shall be planted closer than ten (10) feet from any fire hydrant.

6.2.5.9. PUBLIC TREE CARE

- A. The Town of Rolesville shall have the right to plant, prune, maintain and remove trees, plants, and shrubs within the street rights-of-way and in other public areas to ensure public safety or to preserve or enhance the symmetry and beauty of such public

grounds. The Town Tree Board may recommend the removal of any tree or part thereof which is in an unsafe condition or which, by reason of its nature, is injurious to sewers, electric power lines, gas lines, water lines, or other public improvements, or is affected with any injurious fungus, insect, or other pests.

6.2.5.10. PRUNING, TREE TOPPING, CORNER CLEARANCE

- A. Owners shall remove all dead, diseased, or dangerous trees, or broken or decayed limbs, which constitute a menace to the safety of the public.
- B. The town shall have the right to prune any tree or shrub on private property when it interferes with the proper spread of light along the street from a streetlight or interferes with visibility of any traffic control device or sign.
- C. It shall be unlawful, as a normal practice, for any person, firm, or corporation to top any street tree, park tree, or other tree on public property. Topping is defined as the severe cutting back of limbs to stubs larger than three (3) inches in diameter within the tree's crown to such a degree to remove the normal canopy and disfigure the tree.
- D. Trees severely damaged by storms or other causes, or certain trees under utility wires or other obstructions where other pruning practices are impractical may be exempted from this restriction.

6.2.5.11. DISEASED OR DEAD TREE REMOVAL ON PRIVATE PROPERTY

- A. The town shall have the right to cause the removal of any dead or diseased trees on private property within the town when such trees constitute a hazard to life and property, or harbor insects or disease which constitutes a potential threat to other trees within the town. Removal shall be done by said owners at their own expense within 60 days after the date of service of notice given by the Town of Rolesville. In the event of failure of owners to comply with such provisions, the town shall have the authority to remove such trees and charge the cost of removal on the owners' property tax notice.

6.2.5.12. TREE PROTECTION

- A. The Town of Rolesville Tree Board shall locate, select, and identify any trees which qualify as "Landmark Trees." A tree may qualify as a Landmark Tree if it meets one or more of the following criteria: species rarity, old age, association with an historical event or person, abnormality, scenic enhancement, etc. The following guidelines and

standards shall apply to trees proposed to be retained in a developer's "tree protection plan": not grading or locating utilities within the tree's drip line, placing protective barriers around trees, etc. in association with Section 6.2.4: Landscaping Standards

6.2.5.13. INTERFERENCE WITH THE TREE BOARD

- A. It shall be unlawful for any person to prevent, delay, or interfere with the Tree Board, or any of its agents, while engaging in and about the planting, cultivating, mulching, pruning, spraying, or removing of any street trees, park trees, or trees on private grounds, as authorized.

6.2.5.14. ARBORISTS LICENSE AND BOND

- A. It shall be unlawful for any person or firm to engage in the business or occupation of pruning, treating, or removing street or park trees within the town without first applying for or procuring a license. The license fee shall be annually in advance, provided however, that no license shall be required of any public service company or town employee or volunteer doing such work in the pursuit of their public service endeavors. Before any license shall be issued, each applicant shall first file evidence of possession of liability insurance.